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# Sustainable Development of Institutional and Human Research Capacity for Nutrition

April 7, 2021

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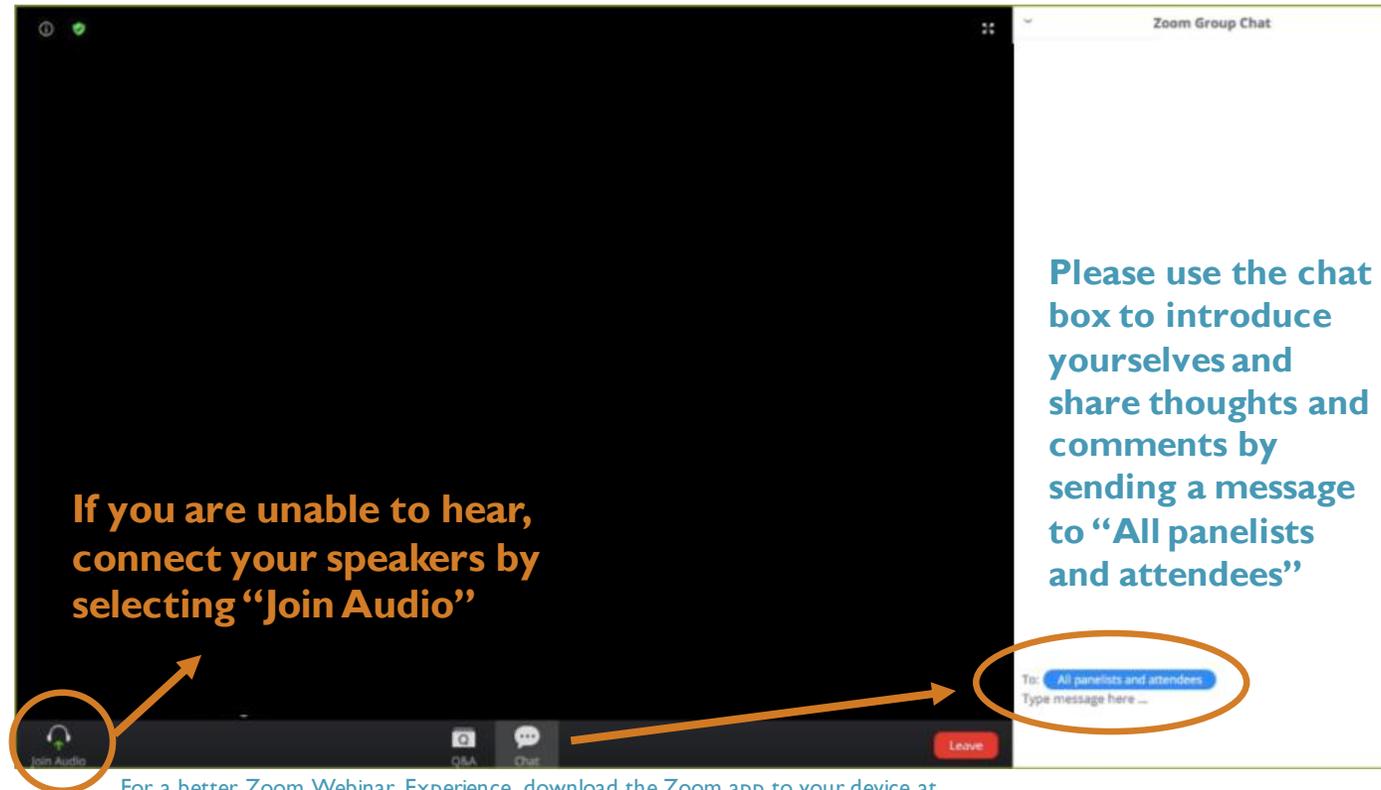


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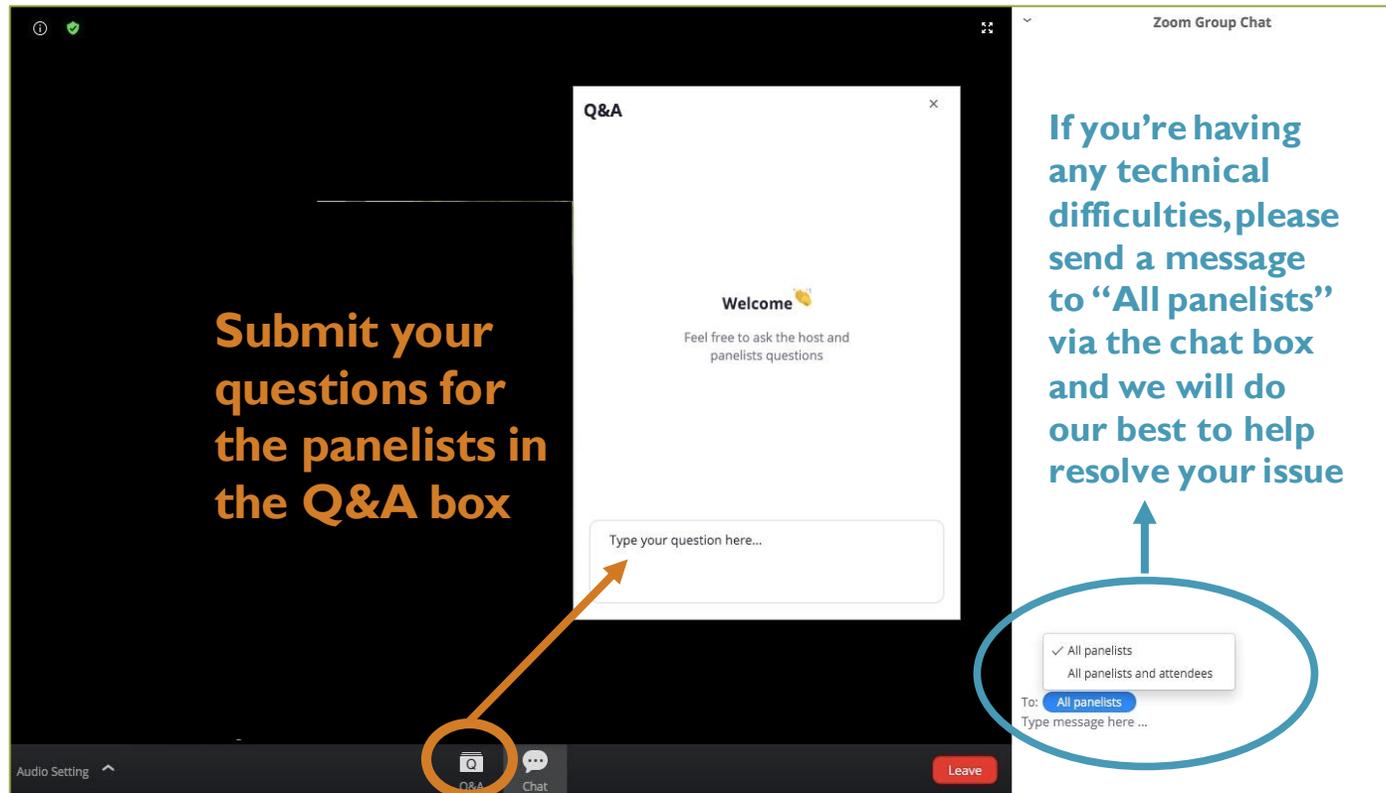
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# Q&A AND CHAT

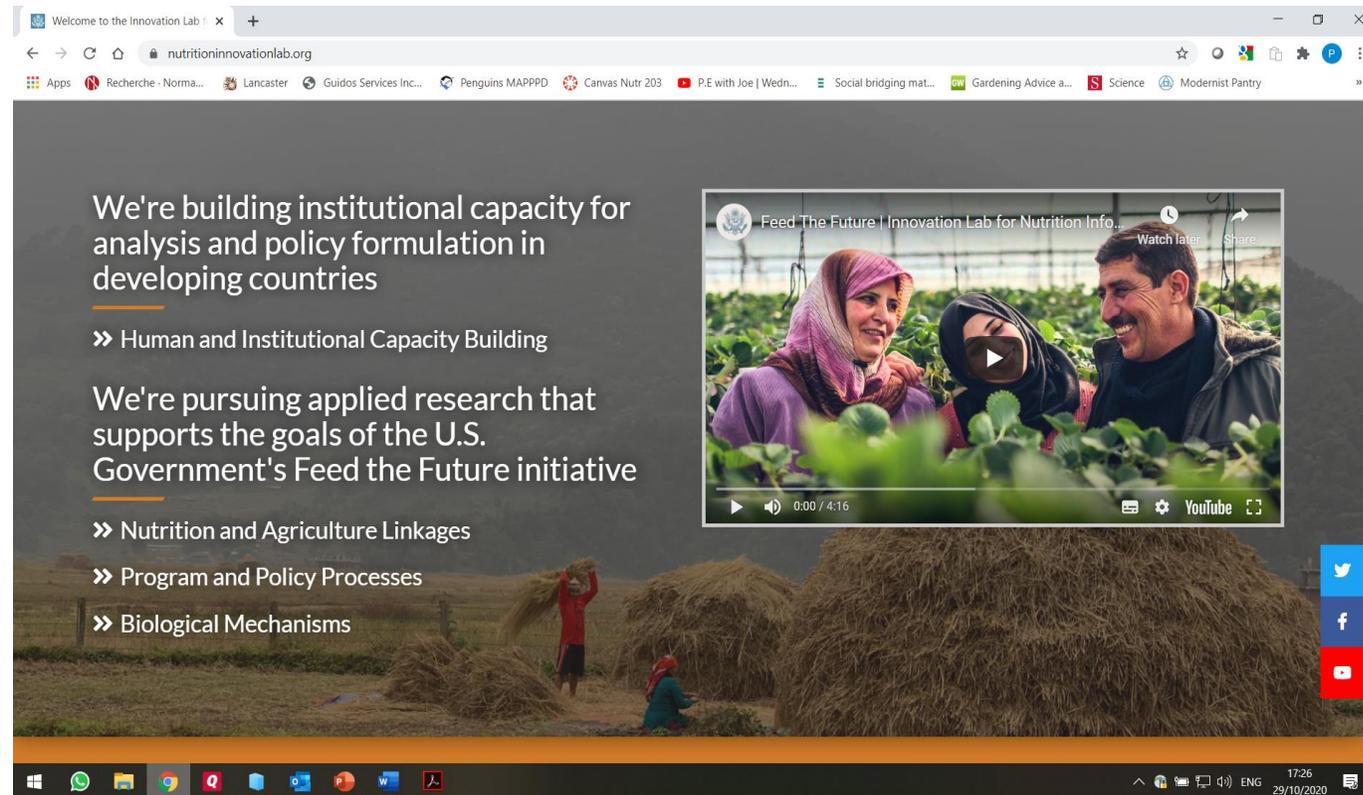


**Submit your questions for the panelists in the Q&A box**

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The image shows a Zoom meeting interface. On the left, a 'Q&A' window is open with a 'Welcome' message and a text input field labeled 'Type your question here...'. An orange arrow points from the 'Q&A' icon in the bottom toolbar to this input field. On the right, the 'Zoom Group Chat' window is open, showing a dropdown menu for recipients with 'All panelists' selected. A blue arrow points from this dropdown to the instructional text above. The bottom toolbar includes 'Audio Setting', 'Q&A', 'Chat', and 'Leave' buttons.

# FEED THE FUTURE INNOVATION LAB FOR NUTRITION



Welcome to the Innovation Lab | x +

nutritioninnovationlab.org

Apps Recherche - Norma... Lancaster Guidos Services Inc... Penguins MAPPPD Canvas Nutr 203 P.E with Joe | Wedn... Social bridging mat... Gardening Advice a... Science Modernist Pantry

We're building institutional capacity for analysis and policy formulation in developing countries

- » Human and Institutional Capacity Building

We're pursuing applied research that supports the goals of the U.S. Government's Feed the Future initiative

- » Nutrition and Agriculture Linkages
- » Program and Policy Processes
- » Biological Mechanisms

Feed The Future | Innovation Lab for Nutrition Info... Watch later Share

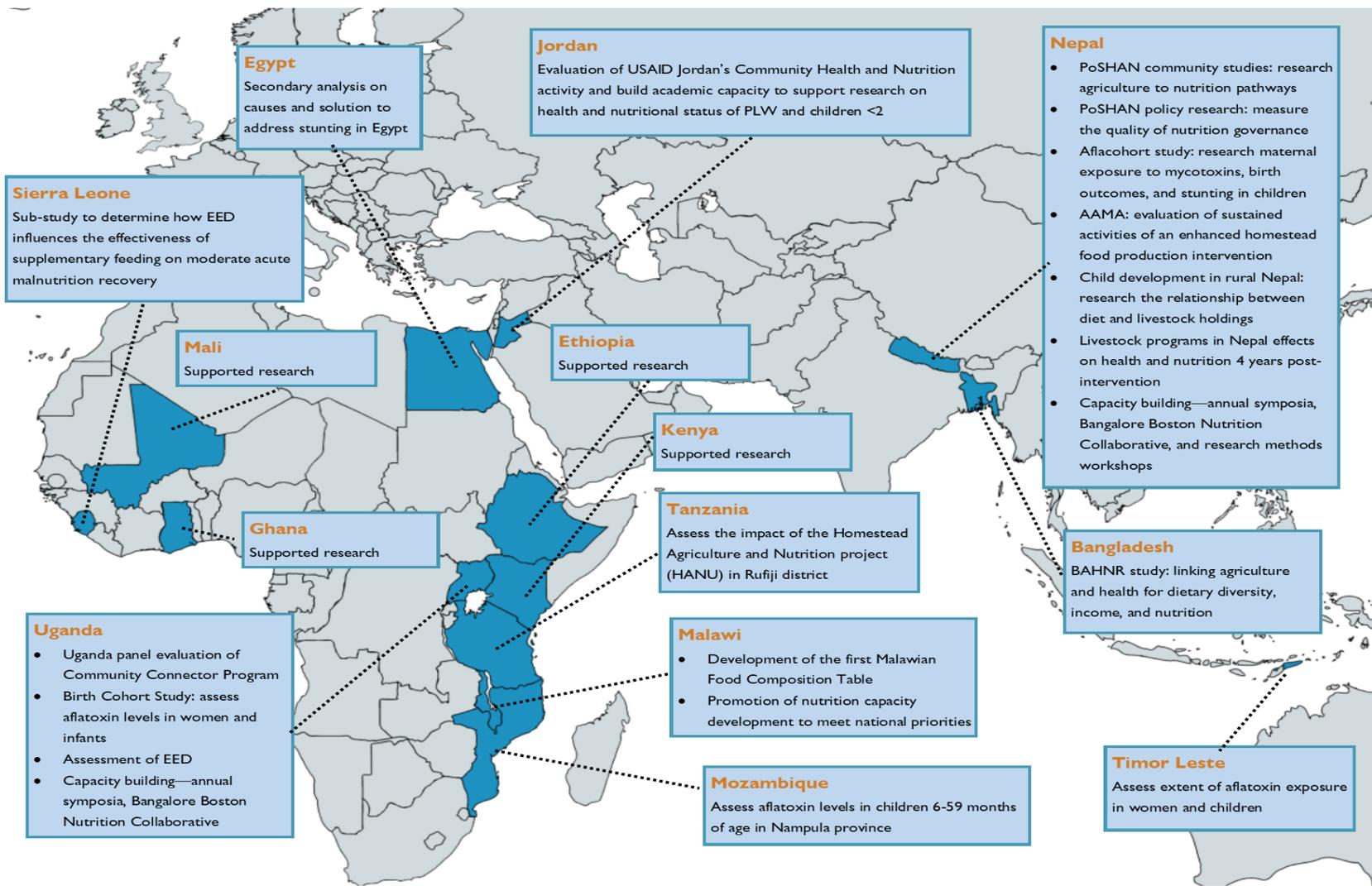
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## GLOBAL AND LOCAL PARTNERS





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INNOVATION LAB FOR NUTRITION  
**WEBINAR SERIES**

WEDNESDAY, APRIL 7TH  
9:00AM - 10:30AM (ET)

## Sustainable Development of Institutional and Human Research Capacity for Nutrition



**SWETHA MANOHAR**

Johns Hopkins University



**RAM SHRESTHA**

CAFODAT College



**REBECCA KURIYAN RAJ**

St. John's Medical College



**BERNARD BASHAASHA**

Makerere University



**KEDAR BARAL**

Patan Academy of Health Sciences



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# Supporting Capacity Building in Nepal

A REVIEW OF THE NUTRITION INNOVATION LAB'S ACTIVITIES  
BETWEEN 2012-2019

Dr. Swetha Manohar, Johns Hopkins University

## CAPACITY BUILDING ACTIVITIES OVERVIEW

### Scientific symposia



- Annual conference on agriculture- nutrition linkages
- Institutional collaborations
- Research on Nepal for Nepal: Decision-making, research priorities and programming
- Audience: academia, policy makers, practitioners, students
- Workshops: interdisciplinary topics
- Networking

### Nutrition research capacity

#### *Broader activities*

- Early career researchers: peer-review papers
- Student Research Exchange

#### *Population-based research methods*

- Graduate Summer Institute of Epidemiology & Biostatistics
- Guest lectures (IOM, NARC)
- PoSHAN Community Studies: annual & seasonal sites
- Conventional anthropometric standardization methods





2012 - 2019



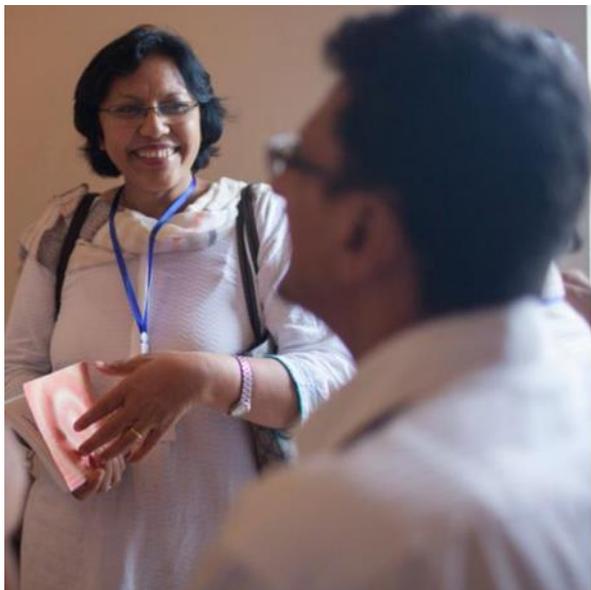
# AGRICULTURE TO NUTRITION PATHWAYS: SCIENTIFIC SYMPOSIA



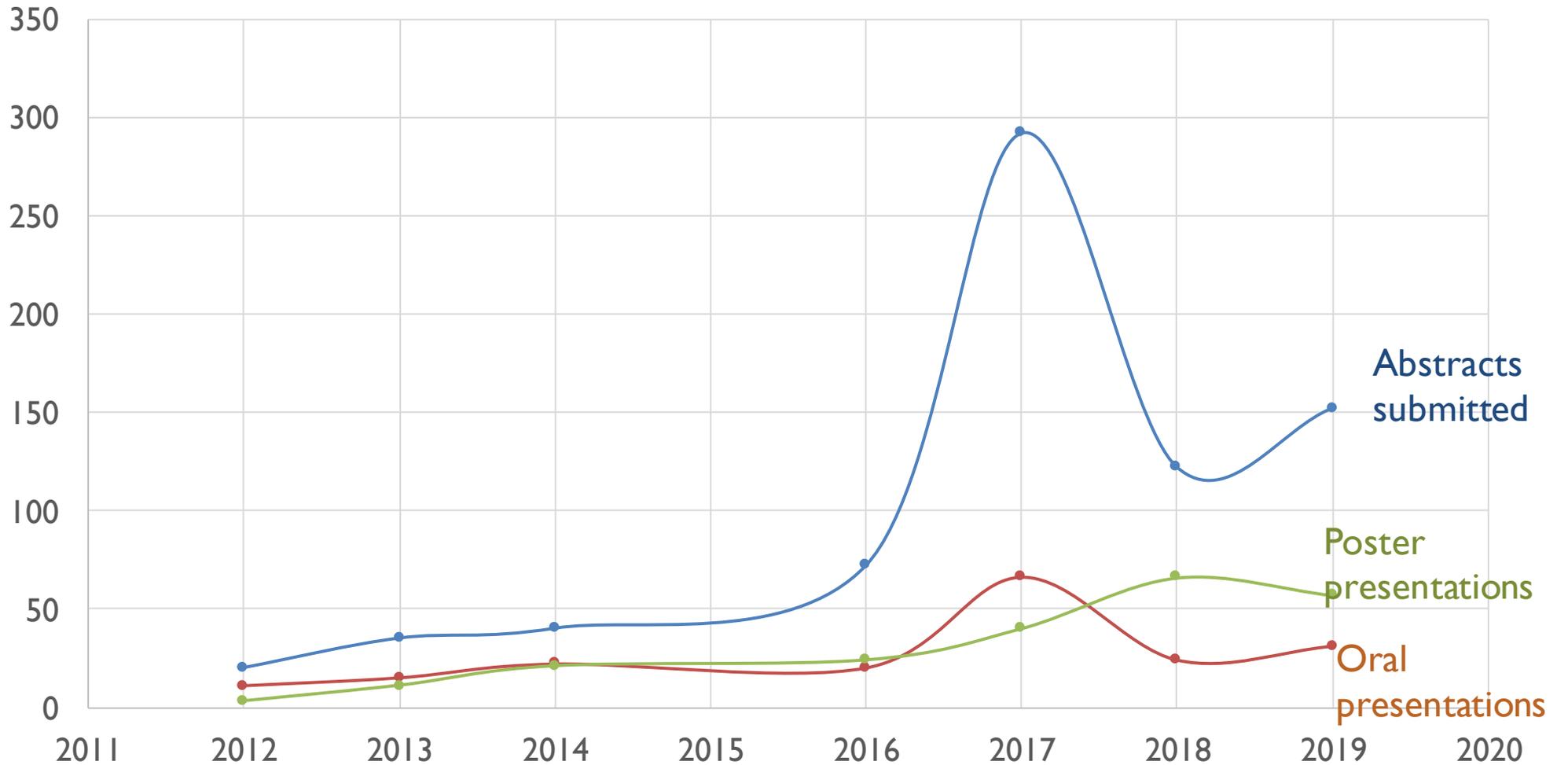


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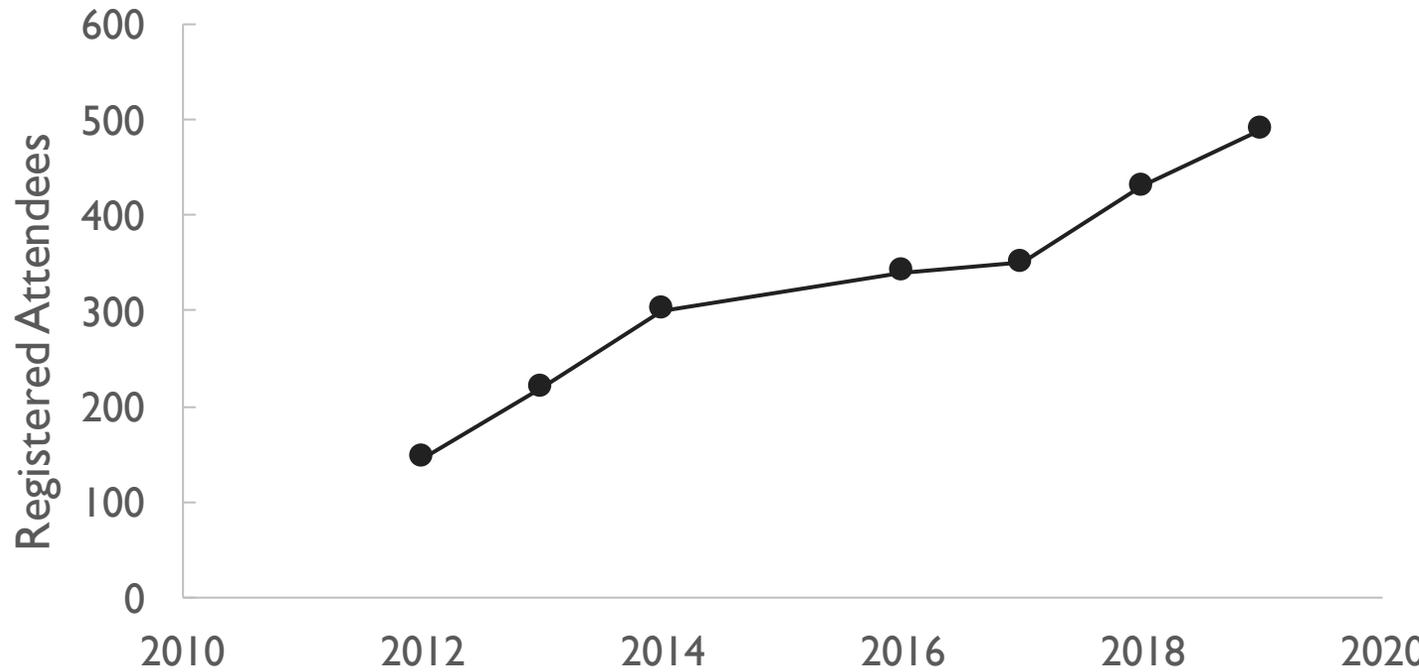
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# QUANTITY & QUALITY



# INCREASING INTEREST & PARTICIPATION



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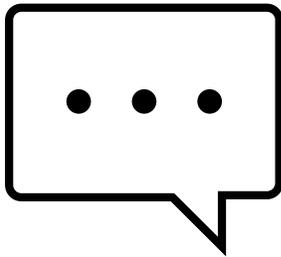
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LANSa  
Leveraging Agriculture for  
Nutrition in South Asia

CGIAR  
RESEARCH PROGRAM ON  
Agriculture for  
Nutrition  
and Health  
Led by IFPRI



## FEEDBACK FROM THE AUDIENCE

*"I have been attending the symposium since 2013, when I was pursuing a Master's Degree in Food Technology. The two-day symposium was very fruitful and continuously notified me about future NIL events. The best aspect of NIL symposium are the panel discussions among different stakeholders. NIL symposia also focus on student related sessions which I find very useful for them to get exposure with academics from other universities."*

- Abhishek Khadka, Young Professionals for Agricultural Development

*"It provides an opportunity to understand the dynamics of agriculture-nutrition pathways in addressing malnutrition. You can relate and translate the evidence and insights shared during the symposia into action, both at your personal and professional front."*

- Sabnam Shibakoti, Ministry of Agriculture and Livestock Development Government of Nepal

*"Nutrition Innovation Lab's Scientific Symposium is an international rostrum that feeds into the growing research demand within Nepal and helps set development goals on agriculture-nutrition-health. I encourage participants to not miss the opportunity to learn about research advances and its linkages to development."*

- Dikshit Poudel, Agriculture Forest University

## NUTRITION RESEARCH CAPACITY



**Sujay Bhattacharya**  
*Then: Nutrition Specialist  
@ Child Health Division  
Department of Health  
Services*

Now: Head of  
Nutrition and Health  
Department @ Action  
Against Hunger, Nepal



**Amod Poudyal**  
*Then: Junior Faculty  
(2012) at the Institute  
of Medicine*

Now: Head of the  
Central Dept of  
Public Health at IOM



**Raman Shrestha**  
*Then: MPH student*

Now: Global Evidence  
& Insights Advisor  
at Marie Stopes  
International



**Rajan Paudel**  
*Then: Junior Faculty  
@ IOM*

Now: Associate  
Professor of Public  
Health.



**KP Lamsal.**  
*Then: MSc Nutrition  
& Dietetics student*

Now: Nutrition  
Specialist, Suahaara  
II

## NUTRITION RESEARCH CAPACITY

**PLOS ONE**

 OPEN ACCESS  PEER-REVIEWED

RESEARCH ARTICLE

### Prevalence of damaged and missing teeth among women in the southern plains of Nepal: Findings of a simplified assessment tool

Priyanka Agrawal , Swetha Manohar, Andrew L. Thorne-Lyman, K. C. Angela, Binod Shrestha, Rolf D. Klemm, Keith P. West



> [Asia Pac J Clin Nutr.](#) 2018;27(3):624–637. doi: 10.6133/apjcn.092017.04.

### Pre-earthquake national patterns of preschool child undernutrition and household food insecurity in Nepal in 2013 and 2014

Sudeep Shrestha <sup>1 2</sup>, Andrew L Thorne-Lyman <sup>1 2 3</sup>, Swetha Manohar <sup>1 2</sup>, Binod Shrestha <sup>2</sup>, Sumanta Neupane <sup>2</sup>, Ruchita Rajbhandary <sup>2</sup>, Raman Shrestha <sup>2</sup>, Rolf Dw Klemm <sup>1 4</sup>, Bareng As Nonyane <sup>2</sup>, Ramesh K Adhikari <sup>2 5</sup>, Patrick Webb <sup>2 6</sup>, Keith P West <sup>7 2</sup>



PONE-D-20-29709R1

### Factors associated with dietary diversity among pregnant women in the western hill region of Nepal: a community based cross-sectional study

Vintuna Shrestha, Rajan Paudel, Dev Ram Sunuwar, Andrew L. Thorne Lyman, Swetha Manohar, Archana Amatya

### Why are farmers keeping cultivatable lands fallow even though there is food scarcity in Nepal?

[Uttam Khanal](#) 

[Food Security](#) 10, 603–614(2018) | [Cite this article](#)

## CHALLENGES & OPPORTUNITY FOR IMPROVEMENT

- Generating not interest but sustained interest
- What are incentives for collaboration?
- The blessing and curse of “free”
- Addressing equity and inclusion



## KEY TAKEAWAYS AND FUTURE DIRECTIONS

- Individual versus systems capacity building
  - Enabling environments
- Equity, diversity and inclusion

# Institutional Capacity Building in Nutrition Education and Research: Perspectives from PAHS and Nepal

**Dr. Kedar Baral, Patan Academy of Health Sciences**

## BACKGROUND

- ❖ NIL is a complex and multi-sectorial project
- ❖ It is difficult to succinctly summarize
- ❖ Fundamental question is how we understand and interpret capacity building
- ❖ My concern is whether or not the agenda of interest **percolate** into the big system both within MOHP and academia
- ❖ The measurement of capacity is a challenging task since it is a multidimensional & dynamic process
- ❖ I will be summarizing NIL through a series of illustrations

## ILLUSTRATIONS

**NIL is one the contributors under the leadership of ministry of health and population and academia.**

1. BBNC participants are now catalysts in academia and practice wherever they are.
2. They are improving and strengthening nutrition science teaching
3. Greater number of students are choosing nutrition topics for their master's thesis
4. People from diverse disciplines are increasingly attracted towards research methodology training/workshop
5. Their engagement and networking motivates me to do more
6. Informal but functional networks of BBNC, training-workshop and symposium participants exist

## ILLUSTRATIONS

1. Poshan study is unique in terms of methods and results. We learned a lot while designing and implementing this study.
2. Aflacohort is a very complex and ambitious community level study. The tools were questionnaires, measurement and samples collected at multiple time points. Samples transport and storage, including maintaining records, involved several personnel in different sites.
  1. Recruitment and mobilizing team, training and supervision, and implementation of activities
  2. Data management
  3. Dealing and communicating ethics committees
  4. We successfully completed field work

## WHAT IS HAPPENING IN NEPAL NOW?

1. Increased numbers of nutrition advocates in health and agriculture sectors
2. New program started and strengthened existing training programs
3. Leadership at MOHP and different institutions are more informed and engaged in nutrition program and activities
4. Continuous feedback being provided by nutrition advocates to the leadership
5. Mid-level trained personnel experienced in complex research are in market
6. PAHS, as a partner in all projects, has strengthened its nutrition training and research cycle management

**Without a doubt, NIL is one of the major contributors to the growing movement in Nepal pushing for an improvement in nutrition status.**

# Capacity Building in Nepal: Experiences and Suggestions

Ram Shrestha, CAFODAT College

## WAY FORWARD

Suggestions and comments from participants (workshop, seminar and proposal writing course organized by NIL)

1. Government stakeholders should work in collaboration with Institutes :
  1. **To build** the capacity of Institutes
  2. **To support** to organize follow-up workshops and seminars
  3. **To Utilize** Institutes' capacity whenever needed
  4. **To Support** and focus on pre-service training research and study

## WAY FORWARD (CONTINUED)

### 2. Potential areas for future support and investment:

1. **Form Alumni** (network) of participants
2. **Build capacity** of Foundations and associations
3. **Technical support** to Institutes Research Department (e.g. CAFODAT colleagues established Nutrition Research Department)
4. **Donors** : financial support to the best project proposal
5. **IP/Program**: involve local institutes in study, research and survey
6. **Improve quality of dietitian**:
  - **NIL workshop** – sensitized dietitian groups
  - **Req tech support**
    - to develop quality and standard syllabus and protocols (international standard)- recognized by govt HR



## CAFODAT Nutrition Booth

# 7th Annual Scientific Symposium on Ag to Nutrition: Pathways To Resilience

**CAFODAT M.Sc. Nutrition and Dietetics Students exhibiting and explaining to distinguished participants the Nutrition and Dietetics activities done under their Purbanchal University Course**



## CAFODAT Nutrition Booth

# 7<sup>th</sup> Annual Scientific Symposium on Ag to Nutrition : Pathways to Resilience



**CAFODAT M.Sc. Nutrition and Dietetics Students exhibiting the Nutrition and Dietetics activities carried out under the Purbanchal University Course**

# Bangalore Boston Nutrition Collaborative (BBNC)



Dr. Rebecca Kuriyan Raj, St John's Research Institute



## WHY DID WE THINK OF IT?

- Need to develop Indian professionals with appropriate skills, knowledge and abilities to work across various disciplines to design appropriate research studies that influence policy-making at the local, national and global level.
- No affordable comprehensive course which trained students to acquire necessary skills and competencies to conduct high quality research in nutrition.
- No Institute had infrastructure and methods for human nutritional studies, public health nutrition or laboratory-based analyses.
- Existing courses were expensive.



## OUR AIM

- BBNC – an educational collaboration between nutrition scientists was established in 2009 to address this training gap. Partners were SJRI, Harvard T S Chan School of Public Health and Tufts University.
- To conduct an interdisciplinary, hands-on course to train the students with skills and knowledge to work together to plan and conduct research studied from “Cell to Society”, influencing policy making at national and global level.
- Pipe Dream- Create a course that was intellectually excellent, using in-house SJRI expertise, infrastructure BUT completely free for the Indian student.

## OUR AIM

- Identify promising students and junior faculty to undergo summer courses or training in Boston.
- Develop distance learning modules.
- Right people – with our enthusiasm and wholehearted drive we put it together - Dr Kurpad, Dr Duggan and Dr Griffiths.

## ACHIEVEMENTS

- Started in Jan 2010 with 25 students.
- USAID, through Tufts collaborated and supported students from Nepal and Uganda.
- Unique – No course fees and travel, accommodation and meals covered for Indian students.
- Every lecture was co-taught and completed by faculty.
- All training carried out at SJRI.
- Over 550 students have been trained.

## ACHIEVEMENTS

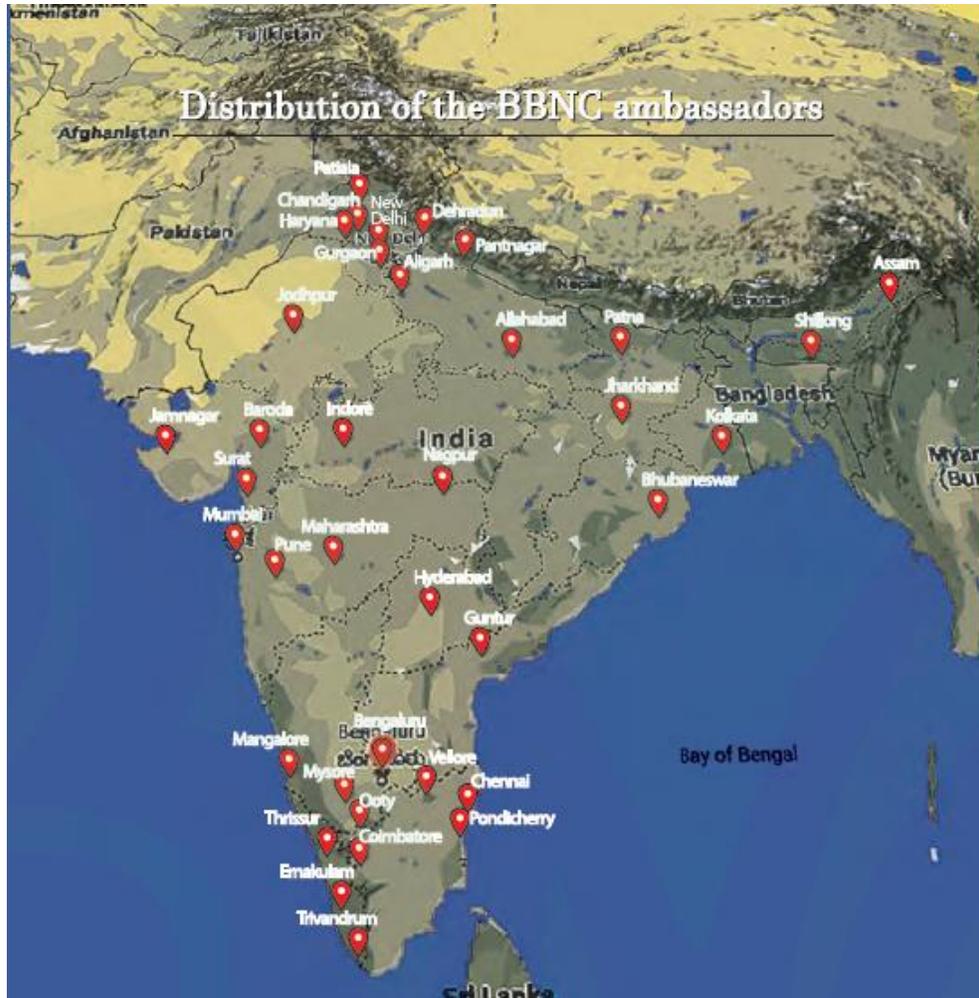
- 11 years of high-quality capacity building of students from India and other countries such as Nepal, Uganda, Australia, Bangladesh, Denmark, Doha, Germany, Mauritius, Pakistan, Singapore, Sri Lanka and Tanzania .
- Web based learning system has been developed (<http://tyro.sjri.res.in>) which is widely used during the two-week course for lecture dissemination, course feedback and interactive learning.
- Twelve students/faculty from SJRI have visited Boston and worked on mutual research activities and educational efforts.
- Harvard College and graduate students have visited SJRI and worked on collaborative clinical research projects, with some publishing their results in the scientific literature.

**Collaborative teaching and building of new partnerships**



**Who did we train?**

- Research Scholars/Nutritionists
- Doctors
- Mid-level faculty
- Technical Consultant/Coordinators to state and central government and other organizations like UNICEF, Southeast Asia Office (SEARO)
- State/National Nutrition Program Manager/officer
- Public Health Officer
- Policy advocacy officer



Institutions - Nepal (24)	Uganda (35)
District Health Office	Mulago National Referral Hospital
Ministry of Health	Makerere School of Public Health
Institute of Medicine, Maharajgunj Medical Campus	National Health Mission
National Health Mission	World Vision Uganda
National Planning Commission	Gulu University



## WHAT MADE IT WORK?

- Division of Nutrition which had all the necessary “in-house” expertise, skill and facility
- Excellent multidisciplinary team of expert faculty
- “Hands-on “ practical demonstration.
- Infectious enthusiasm among the students
- Beautiful campus at SJRI, fine weather of Bangalore.

## FINANCIAL SUPPORT

2010 - 2012: Anonymous funds from Boston

2011 - 2020: United States Agency for International Development (USAID), for students from Nepal and Uganda.

2014 - 2017: United States - India Educational Foundation (USIEF) Obama Singh 21<sup>st</sup> century Knowledge Initiative Awards

2018 - 2019 : Tata Trust

2020 : Part funding for student related costs Indian Council of Medical Research (ICMR) and Sight & Life

## CHALLENGES

- The number of students that we can train each year
- Time when conducted – January
- Financial support

## WAY FORWARD

Create a Massive Open Online Course(MOOC) for distance learning

Change the structure of the course and focus on specific areas of interest

Connect the BBNC students and encourage collaborations and partnership

Apply for funding to sustain the program to build more capacity in area of nutrition and public health

Follow up on BBNC alumni and assess their academic/ career trajectory

## CONCLUSION

- BBNC is a true example of how collaboration and partnership can work well.
- It reflects building of capacity, opportunity and network which has been held together by the simple unique passion of our faculty to teach and share.

“BBNC is a sort of crucible- a place where people from different backgrounds melt together for a few short weeks every year, contributing energy, good will and eagerness to make the world a better place!”

- Dr Jeff Griffiths - Tufts



## REFERENCES

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BMC Medical  
Education



[BMC Med Educ](#). 2014; 14: 5.

PMCID: PMC3897915

Published online 2014 Jan 8. doi: [10.1186/1472-6920-14-5](https://doi.org/10.1186/1472-6920-14-5)

PMID: [24400811](https://pubmed.ncbi.nlm.nih.gov/24400811/)

### Innovations in nutrition education and global health: the Bangalore Boston nutrition collaborative

[Rebecca Kuriyan](#),<sup>1</sup> [Jeffrey K Griffiths](#),<sup>2</sup> [Julia L Finkelstein](#),<sup>3</sup> [Tinku Thomas](#),<sup>1</sup> [Tony Raj](#),<sup>1</sup> [Ronald J Bosch](#),<sup>4</sup> [Anura V Kurpad](#),<sup>1</sup> and [Christopher Duggan](#)<sup>5</sup>

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# Building Capacity in Uganda: Supporting Ugandan Students and Professionals in Nutrition-Agriculture Research for Development

Bernard Bashaasha, Makerere University and Edgar Agaba, Tufts University



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SCHOOL OF PUBLIC HEALTH



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## OUTLINE

- Rationale for Capacity Building
- Capacity Building Activities
- Numbers
- What worked
- Current engagements of professionals
- Enabling factors for scaling up/sustainability
- Challenges
- Unfinished business

## RATIONALE FOR CAPACITY BUILDING IN UGANDA

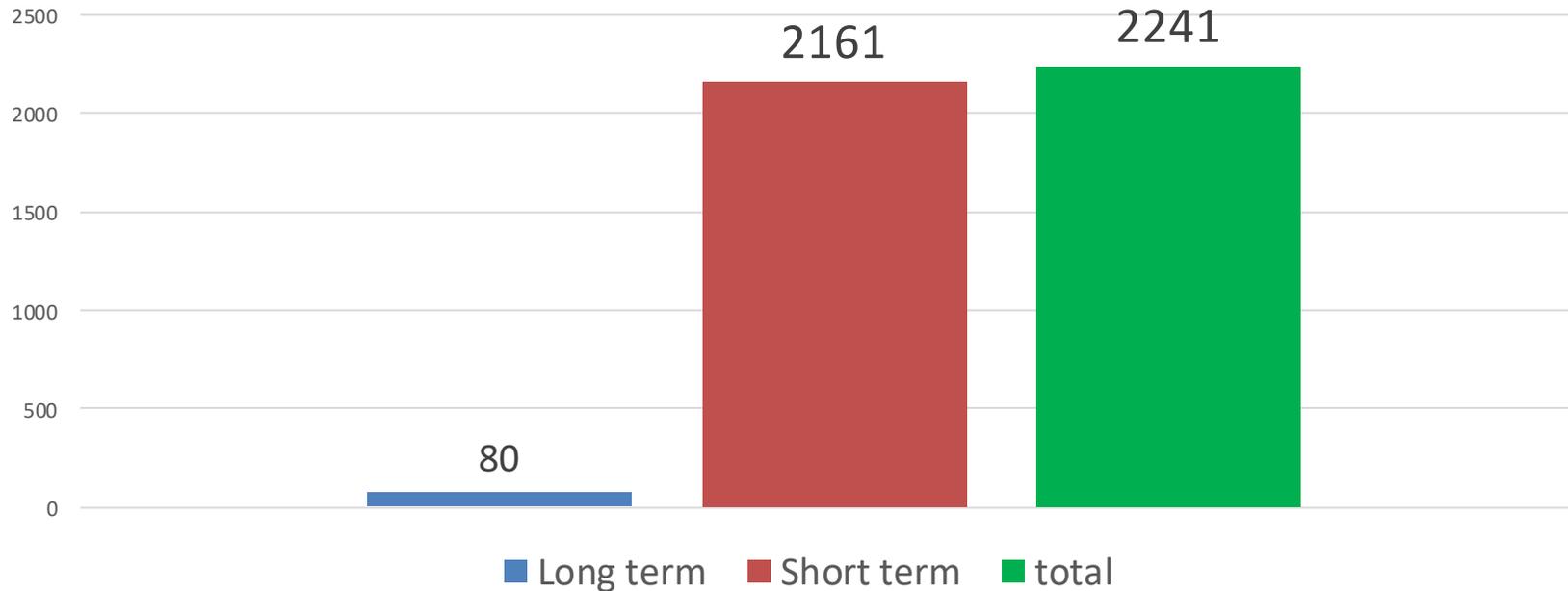
- Knowledge gap in the nexus among Agriculture, Health and Nutrition (National and Local Government levels)
- Largely due to the traditional vertical training approach in the three areas.

## IN-COUNTRY CAPACITY BUILDING ACTIVITIES

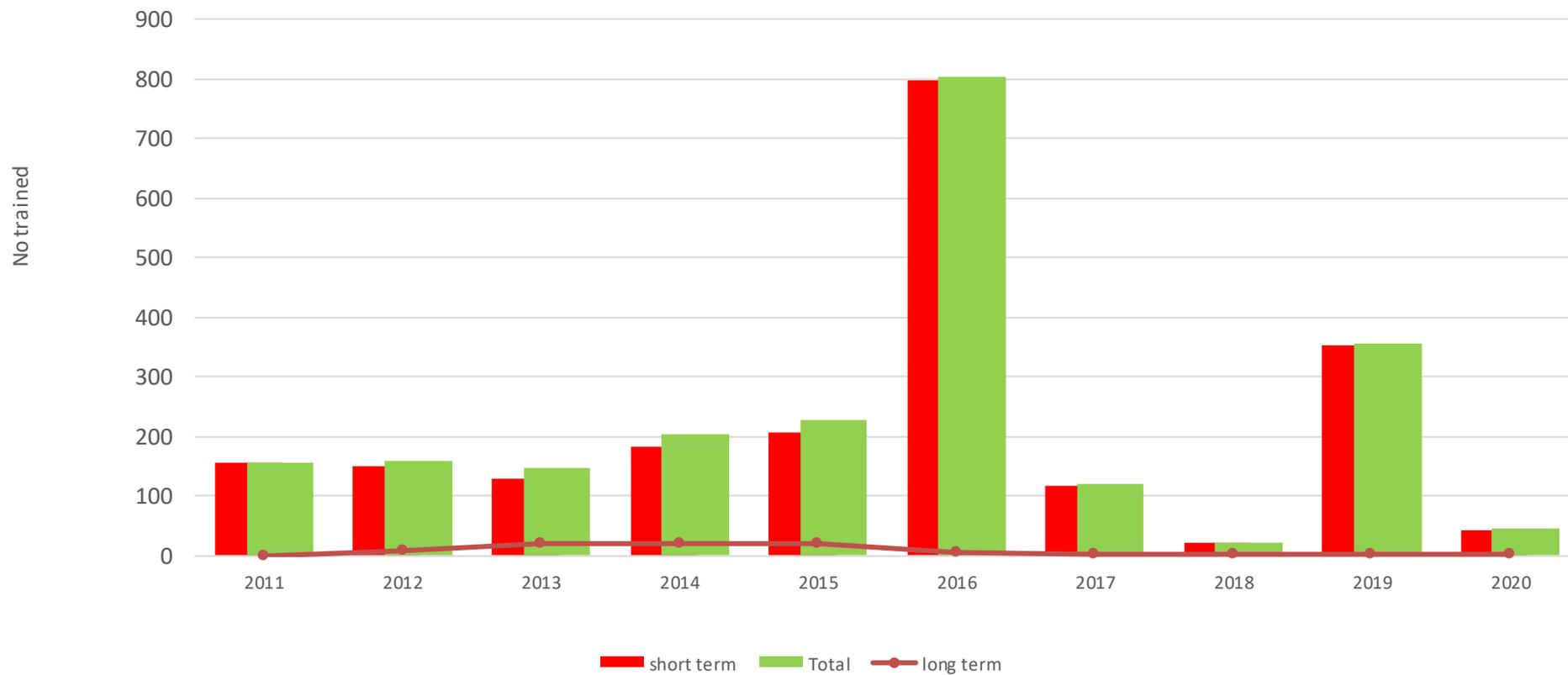
- Short Courses largely BBNC
- Graduate Training (Masters, Ph.D. and Post Doctoral)
- National Scientific Symposia
- District level Awareness-raising Workshops
- Curriculum Development

# NUMBERS

Contribution of NIL to capacity development 2010-2020



# ANNUAL AVERAGE OF 224 UGANDAN PROFESSIONALS RECEIVED CAPACITY BUILDING



## WHAT WORKED WELL

- Awareness for integrated approach raised at higher levels of government (OPM, Line Min)
- Recent govt. policy documents (Uganda Nutrition Action Plan, NDP III etc) have mainstreamed the integrated approach



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## WHAT WORKED WELL (CONTINUED)

- Piloted District Level Workshops as a tool for raising awareness and benefits of integration at Local government levels
- Built impactful partnership among Universities, UCC, Central Government line ministries, Local government and local communities



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## CURRENT ENGAGEMENTS OF TRAINED PROFESSIONALS

- Active in public service (Central and Local government)-Policy making
- Engaged in Academia and in Research
- Providing Health care in Hospitals
- Serving Local Communities (CDOs)
- Engaged with NGOs and other projects

## ENABLERS FOR SCALING UP AND SUSTAINABILITY

- Strategic Partnership and credibility of institutions involved (Harvard, Tufts, Mak, UCU, Kyambogo, Gulu, Tuskegee, IFPRI etc)
- Working with govt. at both National and Local Levels
- Gender lens in capacity building efforts
- Actively pursuing mainstreaming of the integrated approach in national policies
- Exploitation of existing social capital

## ENABLERS FOR SCALING UP AND SUSTAINABILITY

- Existence of Nutrition Champions in the Country (Prof. Kikafunda, Late Kisamba (RIP)).
- Strength of management entity (Harvard, Tufts, Mak, Tuskegee)
- Supportive Country USAID office-actively following and asking for briefs
- Experience from previous engagements.



## CHALLENGES

- Resource constraints
- Government bureaucracy
- Covid-19 pandemic severely constrained capacity building activities



## UNFINISHED BUSINESS

- Additional capacity Building needed-focus on short term training-cheaper and effective
- Further Interrogation of data- more-analyses
- Focus more on Local government level for quick impact



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**Q&A**



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## THANK YOU

- To register for upcoming webinars, you can visit **NutritionInnovationLab.org** or **AdvancingNutrition.org**. More details coming soon!
- Recordings and slides for each webinar will also be posted on our websites.



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[www.feedthefuture.gov](http://www.feedthefuture.gov)



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